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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,134	02/06/2006	Masahiko Igarashi	025416-00026	4553

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ARENT FOX LLP  
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WASHINGTON, DC 20036

EXAMINER
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MACARTHUR, VICTOR L

ART UNIT	PAPER NUMBER
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3679

NOTIFICATION DATE	DELIVERY MODE
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07/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/567,134	<b>Applicant(s)</b> IGARASHI ET AL.	
	<b>Examiner</b> VICTOR MACARTHUR	<b>Art Unit</b> 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “hub is axially secured to the shaft” (newly amended line 6 of claim 1) must be shown or the feature(s) canceled from the claim(s). Note that figures (3, 4, 5, 16, 17, 24, 25, 34-38) fail to show any abutment between 14 and 22a such that the hub appears not to be “axially secured to the shaft”. **See interview summary mailed 4/23/2010 for further explanation.** No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Every element recited in the claims must be described in the written description with reference characters regarding the drawings; or those features must be deleted from the claims. Therefore, the “hub is axially secured to the shaft” (newly amended line 6 of claim 1) must be shown or the feature(s) canceled from the claim(s). Note that figures (3, 4, 5, 16, 17, 24, 25, 34-38) fail to show any abutment between 14 and 22a such that the hub appears not to be “axially secured to the shaft”. **See interview summary mailed 4/23/2010 for further explanation.** No new matter should be entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4-6, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention **without undue experimentation;** or that the scope of any enablement provided to one skilled in the art is not commensurate with the scope of protection sought by the claims. In accordance with MPEP§2164, there is doubt "about enablement because information is missing about one or

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more essential parts or relationships between parts which one skilled in the art could not develop without undue experimentation”. See *In re Wands*, 858 F.2d731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988) and note the following so-called *Wands* factors:

- The breadth of the claims is such that claim 1 requires the newly amended limitation “the hub is axially secured to the shaft” (line 6 of claim 1) while the figures 3, 4, 5, 16, 17, 24, 25, 34-38 show that there is no abutment or other feature such as press fit to effect any such securement.
- The state of the prior art is such that axial securement of a hub to a shaft requires some abutment or interference connection such as a press fit to achieve axial securement. The level skill and predictability in the art by one of ordinary skill would be to provide axial securement by such means.
- However, the amount of direction provided by the inventor is contrary to what is commonly accepted (abutment or interference press fit) since the figures (3, 4, 5, 16, 17, 24, 25, 34-38) show that there is no abutment between 14 and 22a such it appears that the hub is free to slide on the shaft rather than being axially secured as claimed.
- There are no working examples noted in the record of an axially secured hub that has no abutment or interference fit with the shaft.
- The quantity of experimentation needed to make or use the invention based on the content of the disclosure is high since applicant’s disclosure gives no direction for experimentation to find a way to axially secure a hub to a shaft while maintaining the lack of abutment or interference fit shown in the figures.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4-6, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 1, is incomplete for omitting essential elements and cooperative relationships, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements/relationships are the elements that facilitate the newly added limitation “the hub is axially secured to the shaft” (line 6 of claim 1).

#### ***Claim Rejections - 35 USC § 103***

Claims 1, 4-6, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beigang, US 6,142,033, in view of Jacques, FR-2,562,969.

- Because applicant's claims fail to claim any abutment that prevents further sliding of the hub on the shaft, the prior art reads on applicant's newly added limitations since the prior art can achieve such spacing during installation/removal movement of hub to shaft.
- See the interview summary mailed 4/23/2010 for detailed reasoning why applicant must claim an abutment or other feature that prevents further sliding/installing of the hub to shaft in order to overcome the prior art.
- See previous Office Action mailed 12/28/2009 for detailed explanation of how the art combines to read on applicant's claims.

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Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beigang, US 6,142,033, in view of Jacques, FR-2,562,969, as applied to claims 1, 4-6, and 15, and further in view of Dana, GB-855,282.

- See previous Office Action mailed 12/28/2009 for detailed explanation of how the art combines to read on applicant's claims.

### ***Response to Arguments***

Applicant's arguments with regard to the claim rejections have been fully considered but they are not persuasive.

Applicant argues that the newly amended limitations overcome the prior art. This is not persuasive. Because applicant fails to claim any abutment preventing further installation of the hub to shaft, the prior art reads on the claims in that it can achieve the claimed spacing of “predetermined distance” during installation/removal movement of the hub to shaft. See interview summary mailed 4/23/2010 for further explanation.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor MacArthur whose telephone number is (571) 272-7085. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

July 19, 2010

/Victor MacArthur/  
Primary Examiner, Art Unit 3679